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Serial No. 10/647,949

Docket No. NG(MS)6692

REMARKS

Claims 1-10, 12-16, 18-27 and 29-34 are currently pending in the subject application, and are presently under consideration. Claims 1-10, 12-16, 18-27 and 29-34 have been rejected. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Summary of Telephone Interview

Applicant's representatives would like to note their appreciation of the Examiner's courtesy in clarifying a few matters in the Final Office Action in a brief telephone conversation on February 1. It was agreed during this conversation that claims 2, 3, 6, and 7 should be treated as rejected under "*Dialectic: Enhancing Essay Writing Skills with Computer Supported Formulation of Argumentation*", 1999, by Chryssafidou ("Chryssafidou") in view of "*An Argument-Based Agent System with KQML as an Agent Communication Language*", 2001, by Toda, et al. ("Toda"), and in further view of "*TableCurve 2D General Features*", 2002, by Systat ("Systat"). Claims 12-15 should be treated as rejected over Chryssafidou in view of Toda and further in view of any additional references cited in items 11-13 of the Final Office Action. Claims 20, 22, and 24 remain rejected over "*Precision Tree*", 2000, by HALLoGRAM ("Hallogram") in view of Systat. Claim 27 remains is rejected over Chryssafidou in view of Systat. Claims 32-34 should be treated as rejected over Chryssafidou in view of Toda and in further view of Hallogram. The Examiner confirmed that claims 4, 5, 8, 9, 18, 19, 21, 23, 25, and 29 contain allowable matter, but are rejected for their dependence on rejected base claims as well as under 35 U.S.C. §101 for being drawn to non-statutory subject matter.

II. Finality of Rejection

It is respectfully submitted that the final rejection of claims 1-10, 12-16, 18-27, and 29-34 was improper, as there was no amendment on the previous (second) office action response to necessitate the new grounds for rejection, and the amendments made in the first response should have reasonably been expected to be claimed by the Examiner (*See* MPEP §706.07(a), third

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paragraph).

In the first Office Action, dated January 25, 2006, the Examiner rejected the independent claims indicated that a number of independent claims contained allowable matter. In the response to the first Office Action, dated April 24, 2006 (hereinafter, "the first response"), the independent claims were amended to incorporate the matter deemed allowable, new claims incorporating the allowable matter were added, and several claims were amended to remove informalities and to correct their dependencies in light of the amendment. No substantive amendment to the claims were made; the claims indicated as allowable by the Examiner were merely rolled into their respective base claims or recast as new independent claims. Essentially, the application was amended as the Examiner suggested (*See* page 13 of the January 25, 2006 Office Action).

In the second Office Action, dated July 21, 2006, a letter was presented from Tim van Gelder, an Australian philosophy professor who sells a competing product, and it was requested that Mr. van Gelder's assertions in the letter be answered. In a response to the second Office Action, dated September 18, 2006 (hereinafter: "the second response"), it was pointed out that Mr. van Gelder's attempt at a post-publication third party protest was non-statutory, and that his letter should be disregarded. No amendment to the claims was made in this Action.

In the Final Office Action, dated December 5, 2006, the Examiner cites a number of new references in rejecting the previously allowable matter. The Examiner notes in the Office Action that new grounds of rejection have been advanced, but states that "Applicant's amendment necessitated the new ground(s) of rejection." (*See* Final Office Action, pg. 25). As mentioned above, however, no amendment was made in the second response to necessitate the new grounds for rejection. The second response, to which the Final Office Action purports to respond (*See* Final Office Action, pg. 2, item 1), simply addressed the Examiner's concerns over the van Gelder letter. Accordingly, the current final rejection is untimely; if the need for a new search and consideration were necessitated by the amendments, it is questioned why the new search would not have taken place prior to the second Office Action, which was issued in response to the first response. (*See* Second Office Action, pg. 2, item 1).

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It is further submitted that the amendments presented in the first response should have reasonably been expected to be claimed by the Examiner, and are thus insufficient grounds for proceeding to a final rejection in spite of new grounds for rejection. The MPEP, at §706.07(a) ¶3 states that “[a] second or any subsequent action on the merits in any application or patent involved in reexamination proceedings should not be made final if it includes a rejection, on prior art not of record, of any claim amended to include limitations which should reasonably have been expected to be claimed.” The Examiner pointed out allowable matter in a number of dependent claims and suggested that the claims would be allowable if placed in independent form. The amendments made in the first response did exactly that with a few corrections of the dependencies of claims affected by the amendment and the correction of a few informalities which were also pointed out by the Examiner. It is thus respectfully submitted that the final rejection of claims 1-10, 12-16, 18-27, and 29-34 was improper and the withdrawal of the final rejection is respectfully requested.

III. Amendments After Final Rejection

In an effort to respond completely to the Final Office Action of December 5, 2006, Applicants have made several amendments to the claims. Claims 1, 9, 16, 18-23, 25, 30, and 31 have been amended to recite a computer readable medium that interacts with hardware components in accordance with the Examiner's comments on pages 12-14 of the Final Office Action. Claims 10 and 24 were drawn to a computer readable medium, and were cancelled in light of the amendments to claim 1 and 16, respectively. Claim 32 have been amended to correct an informality pointed out by the Examiner. Claim 26 has been amended to incorporate the subject matter of claim 29, which was deemed allowable in the First and Second Office Actions and is rejected solely under 35 U.S.C. §101 in the Final Office Action. Claim 29 has been cancelled. As discussed above, these amendments have been made under the belief that the final rejection of the claim was premature. It is respectfully requested, however, that these amendments be entered even if the Examiner decides to persist in the final rejection of the claims.

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A. The Amendments are Necessary and Good and Sufficient Reasons Exist for Not Previously Presenting the Amendments

It is respectfully submitted that the amendments presented herein were not made earlier, as all of the amendments have been made in response to new grounds of rejection or new objections raised in the Final Office Action. The amendments to claims 1, 9, 16, 18-23, 25, 30, and 31 were each made to overcome the rejection under 35 U.S.C. §101 raised for the first time in the Final Office Action. The amendments utilize substantially the same language used by the Examiner in describing an appropriate computer related manufacture claim in the rejection on page 12 of the Final Office Action. The amendment to claim 32 simply adds a period in response to an objection raised in the Final Office Action. Claim 26 contained matter deemed allowable by the Examiner in the previous two Office Actions, and the rejection under 35 U.S.C. §102 is new in the Final Office Action. The current amendment simply adds matter that has not been rejected over the prior art to the rejected claim. It is thus respectfully submitted that these amendments do not raise any new issues for consideration or require a new search, and their admission into the record is respectfully requested.

B. The Amendments Place the Application in Better Form for Consideration on Appeal

It is further submitted that the amendments presented herein serve to place the application as a whole in better condition for appeal. As the Final Office Action is understood, the amendments to claims 1, 9, 16, 18-23, 25, 30, and 31 should overcome the rejection of those claims as non-statutory over 35 U.S.C. §101. The amendment to claim 32 will remove an informality in that claim. The amendment to claim 26 moves matter deemed allowable into a rejected base claim to eliminate the rejection of claim 26 under 35 U.S.C. §102. As discussed previously, it is not believed that these amendments raise any new issues for consideration or require a new search. It is thus respectfully requested that these amendments be entered into the record.

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IV. Objection to Claim 32

Claim 32 is objected to because of it does not end with a period. The appropriate correction has been made. It is respectfully submitted that this amendment complies with a requirement of form and should thus be entered even if the Examiner persists in the final rejection of the claims. Accordingly, withdrawal of this objection is respectfully requested.

V. Rejection of Claims 1-9, 12-16, 18-27 and 29-34 Under 35 U.S.C. §101

Claims 1-9, 12-16, 18-27 and 29-34 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter: mathematical abstraction and/or software per se. Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claims 1 and 31 have been amended to recite a computer readable medium containing executable instructions and a processor for executing those instructions. Claims 16, 18-23, 25, and 30 have been amended to recite respective computer readable mediums. In light of the Examiner's comments on pages 12-14 of the Final Office Action, we submit that claims 1, 16, 30, and 31, as amended, are drawn to statutory subject matter. Claims 2-9 and 32-34 each depend, either directly or indirectly, from one of claims 1 and 31. Accordingly, it is respectfully requested that the rejection of claims 1-9, 12-16, 18-23, 25, and 30-34 under 35 U.S.C. §101 be withdrawn.

Each element of claims 26 and 27 is presented in means-plus function form, and thus "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." (See 35 U.S.C. §112¶6). The Federal Circuit, in an en banc decision, *In Re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (1994), stated that "the 'broadest reasonable interpretation' that an examiner may give means-plus-function language is that statutorily mandated in paragraph six." Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination." (cited at MPEP §2181, fourth paragraph).

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The specification provides an exemplary operating environment for a system in accordance with the present invention in FIG. 16. In the description of FIG. 16, it is stated that

“[i]n accordance with the practices of persons skilled in the art of computer programming, the present invention has been described with reference to acts and symbolic representations of operations that are performed by a computer, such as the server computer 820, unless otherwise indicated. Such acts and operations are sometimes referred to as being computer-executed. It will be appreciated that the acts and symbolically represented operations include the manipulation by the processing unit 821 of electrical signals representing data bits which causes a resulting transformation or reduction of the electrical signal representation, and the maintenance of data bits at memory locations in the memory system (including the system memory 822, hard drive 827, floppy disks 829, and CD-ROM 831) to thereby reconfigure or otherwise alter the computer system's operation, as well as other processing of signals. The memory locations where such data bits are maintained are physical locations that have particular electrical, magnetic, or optical properties corresponding to the data bits. (¶0088).

In light of the above passage, we submit that claims 26 and 27 include the structure described in the specification, specifically in FIG. 16, should be included in a reading of the claim as part of the “corresponding structure, material, or acts described in the specification” provided for in 35 U.S.C. §112. Accordingly, it is respectfully submitted that claims 26 and 27 are drawn to statutory subject matter, and the withdrawal of the rejection under 35 U.S.C. §101 is respectfully requested.

VI. Rejection of Claim 26 Under 35 U.S.C. §102(b)

Claim 26 stands rejected under 35 U.S.C. §102(b) as being anticipated by “*Dialectic: Enhancing Essay Writing Skills with Computer Supported Formulation of Argumentation*”, 1999, by Chrysafidou (“Chrysafidou”). Claim 26 has been amended to incorporate the subject matter of claim 29, which is rejected solely under 35 U.S.C. §101 in the current action, and was deemed

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allowable in the two previous actions. Withdrawal of this rejection is thus respectfully requested.

VII. Rejection of Claims 1 and 12 Under 35 U.S.C. §103(a)

Claims 1 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of "*An Argument-Based Agent System with KQML as an Agent Communication Language*", 2001, by Toda, et al. ("Toda"). Withdrawal of this rejection is respectfully requested for at least the following reasons.

It is respectfully submitted that Chryssafidou and Toda, taken alone or in combination, fail to teach or suggest a simulation function that alters at least one parameter of the structured argument according to a predetermined series of values, representing changes in the at least one parameter over a period of time as recited in claim 1. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The Examiner notes that Chryssafidou does not provide this element, but interprets the argument-based system of Toda as providing the recited simulation function.

The argument-based system of Toda requires two agents presenting conflicting arguments. The process is essentially a series of arguments and counter-arguments exchanged between the two agents, with the losing agent modifying its position at the end of the process. It will be appreciated, however, that a given argument in Toda appears to result in only a single change to a given position in the losing tree; there is no indication that the value is changed according to a series of values that represent a change in the parameter over a period of time as recited in claim 1. Further, the change takes place in response to interaction between a first agent and a second agent, and the arguments and counterarguments that will be advanced by each agent during the argument process are not determined until after the argument process has begun (*See* Toda, pages 54 and 55). Accordingly, neither the change nor the arguments are predetermined as recited in claim 1. It is thus respectfully submitted that Chryssafidou, even taken in view of Toda, fails to teach or suggest the simulation function recited in claim 1. Claim

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12 depends from claim 1, and is allowable for at least the failure of Chryssafidou and Toda to teach or suggest the simulation function. It is thus respectfully submitted that claims 1 and 12 define patentable invention over the cited art, and withdrawal of this rejection is respectfully requested.

VIII. Rejection of Claims 2, 3, 6, and 7 Under 35 U.S.C. §103(a)

Claims 2, 3, 6, and 7, which each depend directly or indirectly from claim 1, are rejected over Chryssafidou in view of Toda, and further in view of "*TableCurve 2D General Features*", 2002, by Systat ("Systat"). Systat does not remedy the deficiencies of Chryssafidou in view of Toda, and claims 2, 3, 6, and 7 are allowable for at least the reasons discussed above with respect to claim 1. It is thus respectfully requested that the rejection of claims 2, 3, 6, and 7 be withdrawn.

IX. Rejection of Claim 13 Under 35 U.S.C. §103(a)

Claim 13 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of "*A Brief Introduction to Graphical Models and Bayesian Networks*", 1998, by Murphy ("Murphy"). Murphy does not remedy the deficiencies of Chryssafidou in view of Toda, and claim 13 is allowable for at least the reasons discussed above with respect to claim 1. It is thus respectfully requested that the rejection of claim 13 be withdrawn.

X. Rejection of Claim 14 Under 35 U.S.C. §103(a)

Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of "*A Prototype Belief Network-Based Expert System Shell*", 1990, by Wang ("Wang"). Wang does not remedy the deficiencies of Chryssafidou in view of Toda, and claim 14 is allowable for at least the reasons discussed above with respect to claim 1. It is thus respectfully requested that the rejection of claim 14 be withdrawn.

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XI. Rejection of Claim 15 Under 35 U.S.C. §103(a)

Claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of "*AnnotatedHpyerIbisDtd*", 2003, by Thompson et al. ("Thompson"). Thompson does not remedy the deficiencies of Chryssafidou in view of Toda, and claim 15 is allowable for at least the reasons discussed above with respect to claim 1. It is thus respectfully requested that the rejection of claim 15 be withdrawn.

XII. Rejection of Claim 16, 20, and 22 Under 35 U.S.C. §103(a)

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over "*Precision Tree*", 2000, by HALLoGRAM ("Hallogram") in view of Systat. Withdrawal of this rejection is respectfully requested for at least the following reasons.

It is respectfully submitted that Hallogram in view of Systat does not teach or suggest altering a display of the confidence value of the hypothesis of interest in real time to match the updated confidence value in response to each modification of the parameter, wherein the display of the confidence value comprises a qualitative display of the confidence value, such that a non-numerical quality of a node associated with the hypothesis of interest is altered to illustrate a change in the confidence value. The Examiner states that node color is a qualitative display of a confidence value via a non-numerical quality of a node that is taught in Hallogram, but it respectfully submitted that Hallogram does not provide this teaching. The nodes in Hallogram are color coded by node type, which can include logic nodes, chance nodes, end nodes, decision nodes, and reference nodes. (See Hallogram, page 3, "Precision Tree Nodes"). Not only is there no teaching or suggestion of varying the color of the node according to the confidence value or any other value associated with the node, the node color, along with the node shape, is already utilized to distinguish among node types. Systat does not remedy this deficiency. For the reasons described above, claim 16 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

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XIII. Rejection of Claim 27 Under 35 U.S.C. §103(a)

Claim 27 has been rejected over Chryssafidou in view of Systat. Claim 27 depends from claim 26, which has been amended to incorporate allowable matter. It is thus respectfully requested that the rejection of claim 27 be withdrawn.

XIV. Rejection of Claim 30 Under 35 U.S.C. §103(a)

Claim 30 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of Hallogram. Withdrawal of this rejection is respectfully requested for at least the following reasons.

It is respectfully submitted that Chryssafidou in view of Hallogram does not teach or suggest a user interface that displays hypotheses as nodes and varies the color of a node according to a confidence value. The Examiner relies on Hallogram for this teaching, noting that Chryssafidou fails to provide the required teaching. As discussed previously, however, Hallogram also does not teach varying the color of a node according to confidence value or any other value associated with the node. The node color, along with the node shape, is already utilized to distinguish among multiple node types allowed in Hallogram. In fact, the Examiner advances an interpretation of the payoff values of Hallogram as confidence values, but Fig. 5 of Hallogram clearly illustrates that all of the end nodes are the same shade of blue despite varying payoff values listed beside the nodes. Nothing in Chryssafidou remedies this deficiency. For the reasons described above, claim 30 should be patentable over the cited art. Accordingly, withdrawal of this rejection is respectfully requested.

XV. Rejection of Claims 31-34 Under 35 U.S.C. §103(a)

Claims 31-34 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chryssafidou in view of Toda and further in view of Hallogram. Withdrawal of this rejection is respectfully requested for at least the following reasons.

It is respectfully submitted that Chryssafidou, Toda, and Hallogram, taken alone or in combination, does not teach or suggest a user interface in which influence parameters are

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displayed as connectors between nodes representing the associated hypotheses, and the magnitude of a given influence parameter is represented by at least one spatial dimension of the associated connector of the influence parameter. The Examiner relies on Hallogram to provide this teaching, interpreting the branch nodes in Hallogram as connectors, and the probability values at a given branch as influence values. It appears that the Examiner is reading the term "spatial dimension" as a property of the influence value itself (e.g., defining the dimensionality of a numerical vector), but the claim recites "at least one spatial dimension of the associated connector," which is an object displayed by the user interface. Accordingly, by the terms of the claim, the length or thickness of the lines would have to change according to the magnitude of the influence value.

It is respectfully submitted that there is no difference in the spatial dimensions of the branch nodes or any of the lines connecting the nodes in Fig. 5 that can be attributed to probability values or any other values discussed in Hallogram. There is no textual support for this proposition, and Fig. 5 shows a number of branch nodes having different probability values, but similar dimensions, both in the nodes themselves and the lines connecting the nodes. In fact, the only variation of the dimensions of the lines in Fig. 5 appears to come from the layout of the decision network, as earlier branches have longer lines to separate the nodes in the next layer and allow room for later layers of the tree. Where there is no issue of space, the lines appear substantially identical in length. Claims 32-34 depend, directly or indirectly, from claim 31, and are allowable for at least the same reasons. Accordingly, claims 31-34 should be patentable over the cited art, and withdrawal of this rejection is respectfully requested.

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CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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